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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,157	12/14/2001	Anja Knuppel	Beiersdorf 756 -KGB/BSL	1726

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EXAMINER	
WELLS, LAUREN Q	

ART UNIT	PAPER NUMBER
1617	

DATE MAILED: 07/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/017,157	KNUPPEL ET AL.	
	Examiner	Art Unit	
	Lauren Q Wells	1617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 May 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1, 3-15 are pending. The Amendment filed 5/25/04, amended claims 1, 9-11.

The Amendment to the claims filed 5/25/04, is sufficient to overcome the 35 USC 112 rejection over the term "derivative" in the previous Office Action.

Applicant's argument over the term "hydrodispersion" and the Examiner's own search of the definition of "hydrodispersion", wherein a hydrodispersion is a form of an oil-in-water emulsion minus the emulsifier, is sufficient to overcome the 35 USC 112 rejection over this term in the previous Office Action.

Applicant's arguments with respect to claims 1, 3-15 have been considered but are moot in view of the new ground(s) of rejection.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/25/04 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3-4, 6-7, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderle et al. (2002/0028875) in view of Kim et al. (6,372,876), in view of Stein et al. (5,399,563) and in view of the Handbook of Cosmetic Science and Technology.

The instant invention is directed to a method of protecting the skin from exposure to light comprising topically applying to the since an o/w formulation comprising a water dispersible polyurethane composition and at least one UV filtering compound.

Anderle et al. teach plasticized waterborne polyurethane dispersions and manufacturing processes. Taught are personal care compositions comprising the waterborne polyurethane dispersions and sunscreens. Exemplified is a sunscreen composition comprising water-soluble sunscreen and 7.5% of the polyurethane dispersion. The polyurethane dispersion is the product of the process comprising reacting at least one polyisocyanate having an average of about two or more isocyanate groups and at least one active hydrogen containing compound to form a prepolymer, and dispersing the prepolymer in water and chain extending prepolymer by reaction with at least one of water, inorganic or organic polyamine having an average of about 2 or more primary and/or secondary amine groups, or combinations thereof. Aliphatic polycarboxylic acids, such as dicarboxylic acids are taught as preferred diols. While not explicitly stated, it is respectfully pointed out that it is well established in the cosmetic-sunscreen art that sunscreen formulations for personal care application are applied to the skin. The reference lacks an oil-in-water emulsion, preferred diols, and microemulsions. See [0068]-[0084]; [0261]-[0262].

Kim et al. teach the use of polyurethanes which are soluble or dispersible in water as aids in cosmetic compositions. The polyurethanes are composed of at least one compound which contains two or more active hydrogens per molecule, at least one diol containing acid or salt

groups, and at least one diisocyanate. For diols having the structure of the instant claims, see Col. 3, line 53-Col. 4, line 24. The polyurethanes are taught as soluble/dispersible in water without the assistance of emulsifiers, resistant to humidity, and biodegradable. The polyurethanes are taught as having a preferred particulate size of 5-100nm, see Col. 6, lines 1-7.

Stein et al. exemplify oil-in-water sunscreens as preferred sunscreen formulations. Col. 10, line 50.

The Handbook of Cosmetic Science and Technology teaches emulsions as promoting cosmetic elegance and allows otherwise impractical combinations of ingredients, i.e. oil soluble and water soluble materials, to be used in the same product. Emulsification is taught as offering great formulation flexibility, enabling modification of such parameters as feel, viscosity and appearance, to be made relatively easily. In addition, emulsions facilitate the 'dosing' of active ingredients onto the skin in an aesthetically pleasing and consistent manner. Emulsions are additionally very cost effective and offer a viable means of producing a commercially successful product. See page 95. The Handbook additionally teaches that the rate of phase separation can be reduced by reducing the dispersed phase particle size. Table 4 on page 112 of the Handbook teaches microemulsions as transparent. See pages 95, 112, 115, and 117.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teachings of Stein et al. and the Handbook of Cosmetic Science and Technology to teach the sunscreen composition of Anderle in the form of an oil-in-water emulsion because of the expectation of achieving a sunscreen formulation that allows a combination of oil soluble and water soluble active materials and promotes cosmetic elegance.

Further, it would have been obvious to one of ordinary skill in the art at the time the invention was made to teach the polyurethane of 5-100nm of Kim et al. as the polyurethane of Anderle, a) because both Anderle and Kim et al. are directed toward water soluble/dispersible polyurethanes for use in cosmetics; b) because of the expectation of achieving a polyurethane that is soluble/dispersible in water without the assistance of emulsifiers, and because of the expectation of achieving a sunscreen product that is resistant to humidity, thereby providing protection in a humid climate, and biodegradable.

It is respectfully pointed out that McGraw Hill Encyclopedia of Science and Technology defines a microemulsion as typically clear because the dispersed droplets are less than 100 nanometers in diameter.

Claims 8-10, 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderle et al. in view of Kim et al., Stein et al. and the Handbook of Cosmetic Science and Technology as applied to claims 1, 3-4, 6-7, 11 above, and further in view of Koch et al (6,258,963).

Anderle et al., Stein et al., Kim et al. and the Handbook of Cosmetic Science and Technology, are applied as discussed above. The references lack preferred sunscreens.

Koch et al. teach cosmetic compositions comprising UV absorbers. Aminobenzoic acid derivatives, salicylate derivatives, cinnamate derivatives, phenylene-bis-benzimidazyl-tetrasulphonic acid disodium salt, 2,2'-methylene-bis-(6-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol), 2,4-bis-((4-(2-ethyl-hexyloxy)-2-hydroxy)-phenyl)-6-(4-methoxyphenyl)-(1,3,5)-traizine and others are taught as traditional and interchangeable UV absorbers. See Col. 3, line 39-Col. 4, line 59.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the 2,4-bis-((4-(2-ethyl-hexyloxy)-2-hydroxy)-phenyl)-6-(4-methoxyphenyl)-(1,3,5)-traizine or the 2,2'-methylene-bis-(6-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol) of Koch et al. to the composition of Anderle et al. because a) Anderle et al. teach aminobenzoic acid derivatives, salicylate derivatives, and/or cinnamate derivatives as sunscreens in his compositions, and Koch teach 2,4-bis-((4-(2-ethyl-hexyloxy)-2-hydroxy)-phenyl)-6-(4-methoxyphenyl)-(1,3,5)-traizine and 2,2'-methylene-bis-(6-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)-phenol), as interchangeable and combinable with aminobenzoic acid derivatives, salicylate derivatives, and/or cinnamate derivatives.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderle et al. in view of Kim et al., Stein et al. and the Handbook of Cosmetic Science and Technology as applied to claims 1, 3-4, 6-7, 11 above, and further in view of Gers-Barlag et al. (5,725,844).

Anderle et al., Stein et al., Kim et al. and the Handbook of Cosmetic Science and Technology are applied as discussed above. The reference lacks hydrodispersions.

Gers-Barlag et al. teach sunscreen formulations. O/W emulsions and hydrodispersions are taught as interchangeable cosmetic formulations for sunscreens. Hydrodispersions are taught as preferable forms because they do not impart irritance to the skin of a user as a result of surfactants, as hydrodispersions do not contain surfactants. See Col. 2, line 15-Col. 3, line 32.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to teach the oil-in-water emulsions of the combined references in the form of hydrodispersions because Gers-Barlag et al. teach these formulations as interchangeable and because of the expectation of achieving a product that is less irritating to the skin of the user.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lauren Q Wells whose telephone number is 571-272-0634. The examiner can normally be reached on M&R (5:30-4).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan can be reached on 571-272-0629. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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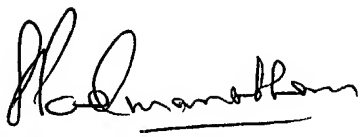

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